REMARKS

Claims 9-21, 30 and 31 have been amended. Claims 1-8, 17, 22, 24, 26, 27 and 29 have been canceled. Claims 58-70 have been added. Claims 23, 25, 28 and 32-57 are withdrawn. Applicants reserve the right to pursue the subject matter of the original claims in this and in other applications.

Claim 5 stands rejected under 35 U.S.C. § 112, first and second paragraphs for failing to meet the enablement requirement and being indefinite. Claim 5 has been canceled.

Claims 1, 4-7, 9 and 10 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Merrill, U.S. Patent No. 7,132,724 (Merrill). Claims 1 and 4-7 have been canceled. Claims 9 and 10 have been amended to depend from claim 11. Accordingly, Applicants believe that this rejection is moot.

Claims 2, 8, 11, 12, 14, 15, 17, 18, 20-22, 24, 26, 27 and 29-31 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Merrill in view of Descure, U.S. Patent No. 6,960,799 (Descure). This rejection is respectfully traversed.

Claims 2, 8, 22, 24, 26, 27 and 29 have been canceled.

As amended, independent claim 11 recites an image pixel array in an imaging device, comprising, among other elements, "a first filter having one or more layers of polysilicon or epitaxial silicon over the first photosensor and substrate, the first filter having a first thickness and absorbing a majority of light at wavelengths shorter than a first wavelength and passing a majority of light at wavelengths longer than the first wavelength; the first photosensor receiving light passed by the first set of one or more layers of polysilicon or epitaxial silicon, absorbing a majority of light received at wavelengths shorter than a second wavelength and longer than the first wavelength, and passing a majority of light received at wavelengths longer than the second wavelength; a second photosensor at or beneath the surface of the substrate and laterally adjacent to the first photosensor; and a second filter having one or more layers of polysilicon or epitaxial silicon over the second

photosensor and substrate, the second filter having a second thickness and absorbing a majority of light at wavelengths shorter than the second wavelength and passing a majority of light at wavelengths longer than the second wavelength; the second photosensor receiving light passed by the second filter, absorbing a majority of light received at wavelengths shorter than a third wavelength and longer than the second wavelength, and passing a majority of light received at wavelengths longer than the third wavelength."

Amended claim 30 recites an imager integrated circuit, comprising, among other elements, "first and second sets of pixels, each including a photodiode comprising a doped region of a first conductivity type at a same depth below the substrate's surface; a first polysilicon filter having a first thickness over each of the photodiodes in the first set of pixels, said first polysilicon filter absorbing a majority of light at wavelengths shorter than a first wavelength and passing a majority of light at wavelengths longer than the first wavelength" and "a second passing filter having a second thickness different than the first thickness over each of the photodiodes in the second set of pixels, the second polysilicon filter absorbing a majority of light at wavelengths shorter than a second wavelength longer than the first wavelength and passing a majority of light at wavelengths longer than the second wavelength."

Similarly, amended claim 31 recites an imager integrated circuit, comprising, among other elements, "first and second sets of pixels, each including a photodiode comprising a doped region of a first conductivity type at a same depth below the substrate's surface; a first crystal silicon filter having a first thickness over each of the photodiodes in the first set of pixels, the first crystal silicon filter absorbing a majority of light at wavelengths shorter than a first wavelength and passing a majority of light at wavelengths longer than the first wavelength" and "a second crystal silicon filter having a second thickness different than the first thickness over each of the photodiodes in the second set of pixels, said second crystal silicon filter absorbing a majority of light at wavelengths shorter than a second wavelength longer than the first wavelength and passing a majority of light at wavelengths longer than the second wavelength."

Neither Merrill nor Descure, even when considered in combination, teach or suggest all limitations of independent claims 11, 30 and 31. Merrill relates to a vertical-color-filter detector group. Merrill's detector group includes a red, a green and a blue detector, vertically stacked over one another. Each detector is a doped region over a doped substrate. Merrill is silent about photosensors or photodiodes laterally adjacent to one another. Further, Merrill is silent about first layers or filters of polysilicon or epitaxial silicon having a first thickness over first photosensors/photodiodes and the substrate and second layers or filters of polysilicon or epitaxial silicon having a second thickness over second photosensors/photodiodes and the substrate.

Descure relates to an array of photodiodes that are divided into three interleaved sub-arrays. The first sub-array is covered by first, second and third oxide layers, the second sub-array is covered by the second and third oxide layers, and the third sub-array is covered by the third oxide layer. Subsequently, all three sub-arrays are covered by a polysilicon layer that is set to the same potential as the substrate. Descure at col. 2, lines 19-46. As the polysilicon layer taught by Descure is formed over all sub-arrays in a single step, it has a same thickness over all sub-arrays. Therefore, like Merrill, Descure is silent about first layers or filters of polysilicon or epitaxial silicon having a first thickness over first photosensors/photodiodes and the substrate and second layers or filters of polysilicon or epitaxial silicon having a second thickness over second photosensors/photodiodes and the substrate. Thus, even when considered in combination, neither Merrill nor Descure teach or suggest all limitations of independent claims 11, 30 or 31. For at least these reasons, withdrawal of this rejection is respectfully requested.

Claims 13 and 19 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Merrill in view of Descure and in further view of Rhodes, U.S. Patent No. 6,815,743 (Rhodes). This rejection is respectfully traversed.

As discussed above, neither Merrill nor Descure, even when considered in combination, teach or suggest all limitations of independent claims 11, 30 and 31. Rhodes is cited for teaching a photosensor as a photogate, photodiode, photoconductor or other photosensitive elements (Office

Action at 25) and does not supplement the deficiencies of Merrill and Descure. For at least these reasons, withdrawal of this rejection is respectfully requested.

Claim 16 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Merrill in view of Descure and in further view of Randazzo, U.S. Patent No. 6,093,585 (Randazzo). This rejection is respectfully traversed.

As discussed above, neither Merrill nor Descure, even when considered in combination, teach or suggest all limitations of independent claims 11, 30 and 31. Randazzo is cited for teaching that a layer of TEOS can be formed over a polysilicon layer (Office Action at 26) and does not supplement the deficiencies of Merrill and Descure. For at least these reasons, withdrawal of this rejection is respectfully requested.

In view of the above, Applicants believe the pending application is in condition for allowance.

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Respectfully submitted,

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